REMARKS

Claims 1, 4-11, 13-16 and 30-39 are now pending in the application. Claims 2, 3, 12, 17-29 have been cancelled. Claims 1, 4-6, 11, 30, 33, 38 and 39 have been amended. The basis for the foregoing amendments may be found throughout the written description, drawings and claims as originally filed. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

EXAMINER INTERVIEW

Applicant thanks the Examiner for the courtesies extended during a phone interview with Applicant's representative, Brian Hollis, on November 17, 2006. During the phone interview, the art of record was discussed in view of the pending claims. More specifically, U.S. Pat. Nos. 6,823,878 (Gadini), and 6,085,588 (Khadkikar) and the article "PTC resistor heating: a new generation of elements" (2001 article) were discussed. Applicant's representative pointed out to the Examiner that Gadini discloses a control system that requires one component to heat the water (H) and another distinct component to sense temperature (S2). As recited in Gadini, the control system will complete "heating of the water contained in the tank 17, activating the relevant heating means H; upon reaching an optimal preset temperature for regeneration purposes of the resins R, as detected through appropriate temperature sensing means pertaining to S2" (see e.g., Col. 6, Lines 30-36).

Similarly, Khadkikar requires one component to heat the water (heating element 32) and another distinct component to sense the temperature (temperature measurement device 16). Applicant's representative pointed out to the Examiner that the 2001 article

describes PTC resistor heating, however fails to teach or suggest how such a resistor can be electrically connected to a data processing unit that measures the resistance of the heating element and determines the water temperature using the resistance measurement. Further, the 2001 article does not teach or suggest a system that sets a target resistance based on a user identified input (such as a wash cycle and/or temperature set at a control panel of a washer).

REJECTION UNDER 35 U.S.C. § 102

Claims 1-5, 8-10 and 30-32 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. No. 6,823,878 (Gadini). This rejection is respectfully traversed. At the outset, Applicant notes that claims 1 and 30 have been amended to more clearly recite the relationship between the control panel (user input interface), processing unit and the heating element. More specifically, claim 1 recites "a control panel providing a plurality of user identified wash cycles, wherein a selection of a wash cycle ... sets a corresponding target resistance ... for the heating element ... and a corresponding water temperature for the dishwasher". Similarly, claim 30 has been amended to include "a user input interface comprising a selector switch having a plurality of user selectable states, and wherein a state of the selector switch defines a target resistance". In sum, a target resistance is based on a user selected wash cycle (or state).

As discussed during the Examiner Interview, Gadini requires a first component (sensing means S1) for determining temperature, and a second component (heating means H) for heating the water. The instant invention does not require separate

components to determine temperature and heat the water. Instead, heating element 24 accomplishes both.

While the 2001 article is not part of this rejection, Applicant notes that the 2001 article discusses five examples of positive temperature coefficient (PTC) resistors. In each example, the PTC resistor is a component of a heating element that does not "set a target resistance" based on a user selection. Instead, the resistors have a pre-set range and are described as "self-regulating". In this way, the 2001 article alone or in combination with Gadini fails to teach or suggest a control panel that sets a target resistance based on a user selected wash cycle (or state) and a processing unit operable to measure the resistance of the heating element and determine water temperature using the resistance measurement. Therefore, Applicant respectfully requests reconsideration and withdrawal of this rejection.

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. No. 6,085,588 (Khadkikar). This rejection is respectfully traversed. Khadkikar, like Gadini, requires two distinct components to (1) determine a temperature and (2) heat the water. Specifically, Khadkikar provides a flow rate sensor requiring a temperature measurement device 14 including a thermistor 42 as a temperature sensor and a heating element 32 for heating the water. Khadkikar, alone or combined with the 2001 article, fails to teach or suggest a control panel that sets a target resistance based on a user selected wash cycle (or state) and a processing unit operable to measure the resistance of the heating element and determine water temperature using the resistance measurement. Therefore, Applicant respectfully requests reconsideration and withdrawal of this rejection.

REJECTION UNDER 35 U.S.C. § 103

Claims 6, 7, 11-16, and 33-39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gadini in view of U.S. Pat. No. 4,159,211 (Hoffman). This rejection is respectfully traversed, particularly in view of the foregoing amendments.

At the outset, Applicant notes that claim 11 has been amended to recite a control panel coupled to the processing system and providing a plurality of wash cycles, the control panel operative to set a target resistance and a desired water temperature based on a selection of one of the wash cycles. Claims 33-37 ultimately depend from claim 30, which has been similarly amended above.

Claims 38 and 39 have been amended to include a user input interface providing a user a plurality of user defined temperature settings and a processing unit controlling the operation of the heating element based on the user defined temperature setting, measuring the resistance of the heating element, and comparing a measured resistance with a target resistance. As set forth above, Applicant maintains that Gadini fails to teach or suggest a heating element operative to heat water in the dishwasher and change in resistance in response to the water temperature. Further, Gadini fails to teach or suggest a processing system coupled to the heating element and operative to measure the resistance of the heating element and determine the water temperature in the dishwasher using the resistance measurement.

Hoffman provides a dishwasher having a timer switch 80 that insures wash water at set temperatures for all cycles. Power for the heater is provided through timer switch means 81 connected through a first thermostat 117. If the water is below its set temperature, the first thermostat will energize a heater 50. The combination of Hoffman

does not cure the deficiencies of Gadini. In other words, Hoffman does not teach or suggest a processing unit that controls operation of a heater and measures the resistance of the heating element. Hoffman merely teaches a control panel having a plurality of wash cycles. Moreover, any combination of the cited art would not teach a heating element operative to heat water in a washer and change in resistance in response to the water temperature, a processing system controlling operation of the heating element and operative to measure the resistance of the heating element and determine the water temperature in the dishwasher using the resistance measurement. Therefore, Applicant respectfully requests reconsideration and withdrawal of this rejection.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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